

WHAT IS CLAIMED IS:

See B3
1. An isolated or purified nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a nucleotide sequence of a *Ketogulonigenium* plasmid replicon found on the endogenous plasmid contained in Deposit No. NRRL B-30035.

2. The nucleic acid molecule of claim 1, wherein said plasmid replicon comprises the nucleic acid sequence in SEQ ID NO:1.

3. The nucleic acid molecule of claim 1, comprising the DNA sequence shown in SEQ ID NO: 3.

See B4
4. The nucleic acid molecule of claim 1 comprising the DNA sequence shown in SEQ ID NO:4.

5. The nucleic acid molecule of claim 1, comprising a replicon functional in *E. coli*.

6. The nucleic acid molecule of claim 1, comprising a replicon functional in an organism selected from the genera consisting of *Acetobacter*, *Corynebacterium*, *Bacillus*, *Rhodobacter*, *Paracoccus*, *Roseobacter*, *Pseudomonas*, *Pseudogluconobacter*, *Gluconobacter*, *Serratia*, *Mycobacterium*, and *Streptomyces*.

See B5
7. The nucleic acid molecule of claim 1, comprising a mob region.

8. The nucleic acid molecule of claim 7, wherein said mob region comprises a mob gene and an oriT from a conjugation plasmid.

9. The nucleic acid molecule of claim 8, wherein said conjugation plasmid is selected from plasmids which are included within the incompatibility groups consisting of IncP, IncQ, IncC, IncB, IncF, IncG, IncI, IncK, IncM, IncN, IncPa, IncPb, IncW, IncX, and IncZ.

10. The nucleic acid molecule of claim 1, comprising a temperature-sensitive replicon.

11. The nucleic acid molecule of claim 1, comprising at least one marker gene.

12. The nucleic acid molecule of claim 11, wherein said marker gene comprises a nucleotide sequence operative to direct synthesis of a protein conferring antibiotic resistance in a host cell population.

13. The nucleic acid molecule of claim 12, wherein said antibiotic is selected from the group comprising ampicillin, chloramphenicol, erythromycin, kanamycin, spectinomycin, streptomycin and tetracycline.

14. The nucleic acid molecule of claim 1, comprising at least one further nucleic acid sequence, wherein said further nucleic acid sequence is selected from the group consisting of a polylinker insert, an expression control sequence, a cos site, a terminator sequence, a ribosome binding site, a DNA sequence encoding a signal peptide, a DNA sequence encoding a polypeptide and a DNA sequence encoding a polypeptide containing one or more signal peptides.

15. The nucleic acid molecule of claim 14, wherein said expression control sequence comprises an *E. coli*-derived promoter.

16. The nucleic acid molecule of claim 14, wherein said expression control sequence comprises a *Ketogulonigenium*-derived promoter.

17. The nucleic acid molecule of claim 14, further comprising a His-Tag sequence.

18. The nucleic acid molecule of claim 14, further comprising a nucleic acid sequence encoding a polypeptide sequence not present in *Ketogulonigenium*.

19. The nucleic acid molecule of claim 14, further comprising a cosmid site.

20. The nucleic acid molecule of claim 1, further comprising a DNA sequence from an *E. coli*-derived plasmid.

See p6
21. The nucleic acid molecule of claim 19, wherein said *E. coli*-derived plasmid is selected from the group comprising pET, pUC18, and pUC19.

22. The nucleic acid molecule of claim 1, further comprising a reporter gene.

See p7
23. The nucleic acid molecule of claim 21, wherein said reporter gene encodes a protein selected from the group consisting of β -galactosidase, β -glucuronidase, luciferase, green fluorescent protein α -amylase, and uroporphyrinogen III methyltransferase (cobA) from *Propionibacterium freudenreichii*.

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B7

24. The nucleic acid molecule of claim 1, wherein said nucleic acid molecule autonomously replicates in *Ketogulonigenium* and at least one organism selected from the genera consisting of *Acetobacter*, *Corynebacterium*, *Bacillus*, *Rhodobacter*, *Paracoccus*, *Roseobacter*, *Pseudomonas*, *Pseudogluconobacter*, *Gluconobacter*, *Serratia*, *Mycobacterium*, and *Streptomyces*.

25. A transformed *Escherichia coli* cell comprising the nucleic acid molecule of claim 1.

26. A transformed *Ketogulonigenium* cell comprising the nucleic acid molecule of claim 1.

27. A method for producing a polypeptide, comprising culturing a host cell comprising the nucleic acid molecule of claim 14 under conditions such that said polypeptide is expressed, and recovering said polypeptide.

28. A method of transforming a host cell with a nucleic acid comprising:

- (a) transforming a host cell with the nucleic acid of claim 1;
- and
- (b) obtaining a stably transformed host cell.

29. The method of claim 28, wherein said transformation comprises conjugation.

30. The method of claim 28, wherein said transformation comprises electroporation.